STOKESIA LAEVIS (Hill) Greene, Eryth. 1: 3. 1893.

Carthamus laevis Hill, Hort. Kew. 57. *pl. 5.* 1769.

Stokesia cyanea L'Her. Sert. Angl. 27. 1788.

Cartesia centauroides Cass. Bull. Philom. 1816: 198. 1816.

This beautiful plant, usually considered the rarest of the Compositae, is extremely abundant along the whole length of the Mississippi coast, growing in dry or moist pine-barrens, and bearing a striking resemblance to a large *Aster*.

ERIANTHUS TRACYI Nash, Bull. Torr. Club, 24: 37, 1897.

A fine new species of *Erianthus*, collected only in a single locality in the vicinity of the Agricultural College, near Starkville. (No. 1341.)

Proceedings of the Club.

TUESDAY EVENING, FEBRUARY 9, 1897.

The President occupied the chair and there were about 200 persons present.

The minutes of the last meeting were read and approved.

The President reported the following appointments of Committees:

Committee on Finance: J. I. Kane, Wm. E. Wheelock, M.D.

Committee on Admissions: Cornelius Van Brunt, Jeannette B. Greene, M.D.

Library and Herbarium Committee: Eugene P. Bicknell, Helen M. Ingersoll, Wm. E. Wheelock, M.D., Marie L. Sanial.

Committee on Local Flora.—Phanerogamia: Prof. Thos. C. Porter, N. L. Britton, Ph.D., H. H. Rusby, M.D. Cryptogamia: Prof. L. M. Underwood, Maria O. Le Brun, Smith Ely Jelliffe, M.D.

Committee on Mosses: Mrs. Elizabeth G. Britton.

The regular program was then taken up, being a lecture by Henry A. Siebrecht, entitled "Orchids, their Habitat, Manner of Collecting and Cultivation."

The paper was handsomely illustrated with lantern slides by Mr. Cornelius Van Brunt, colored by Mrs. Van Brunt.

Mr. Siebrecht in his paper referred to the hardships undergone by the orchid-collector, and paid a tribute to the energy displayed by three friends of the speaker, Carmiole, an Italian, who had come to New York when the speaker was a boy; Föstermann, who died about two years ago, the victim, like most collectors, of disease contracted in that enterprise; and Thieme, who had made three trips for Mr. Siebrecht, and who went last to Brazil in search of the *Cattleya autumnalis*, but was never heard from.

Mr. Siebrecht referred also to three trips of his own in quest of orchids, to the West Indies, Venezuela, Brazil and Central America. He then exhibited the lantern views, which were of remarkable beauty and evoked frequent applause. They included numerous representatives of the chief tropical genera cultivated, also with views of interiors showing a house of *Cattleyas* in full blossom, etc. Slides showing numerous species native to the eastern United States followed.

Mr. Siebrecht then described the culture of orchids and classed their diseases, as chiefly because too wet, when the "spot" closes the stomata, or too dry when they collect insects. He referred to their insect enemies at home, the "Jack Spaniard," which eats the marrow from the bulb, and the cattleya-fly, now introduced into English houses. He mentioned the ravages of *Cladosporium*, and the great difficulty with which orchids of the genus *Phalaenopsis* are preserved from fungal diseases.

The subject was further discussed by the President, Dr. Britton, Mr. Samuel Henshaw and Mr. Livingston, the latter referring to his recent experience as an orchid collector. A slide was exhibited, made from a photograph taken by Mr. Livingston, showing his orchids packed upon oxen and so carried down from the mountains to Magdalena.

Mr. Henshaw spoke of his visit to Mr. Siebrecht's nursery in Trinidad, and of the growth made there by *Crotons*, as much in one year as here in four or five. In those gardens they divide their plants by rows and edges of *Crotons* which are sheared off as we would trim a privet-hedge. Mr. Henshaw also paid a deserved tribute to Mrs. Van Brunt for the wonderful success of her coloring of the orchid slides.

WEDNESDAY EVENING, FEBRUARY 24, 1897.

In the absence of the President, Vice-President V. P. Allen presided. There were 28 persons present.

The scientific program was as follows:

1. By Mr. Arthur Hollick, "A fossil *Phragmites* from Staten Island." (Published in this issue of the BULLETIN.)

2. By Mr. E. O. Wooton, "Remarks on some of the rarer Plants of New Mexico."

Mr. Wooton sketched briefly the botanical regions of New Mexico, dividing the territory by differences in the flora into (a) the river valleys, (b) the table-lands or *mesas*, (c) the dry, rocky and narrow mountain ranges, and (d) those areas which are of uniformly high altitude and have numerous mountain ranges closely associated and more or less timbered. He also traced upon a map the routes traversed by most of the botanical collectors who have visited New Mexico, beginning with Pike and including Long, Gregg, Wislizenus in 1846, Emory, Marcy, Sitgreaves and Woodhouse, with the work of the Mexican Boundary and other surveys, 1849 and after. Mr. Wooton was himself practically the first to make collections in the southeast section of the territory, a very interesting botanical region, with high mountains, some of which were illustrated by photographs. Specimens of Mr. Wooton's collecting were then shown, exhibiting about 35 flowering plants and ferns, and including among those familiar in the East: *Pellaea atropurpurea*, *Cystopteris fragilis*, *Pteris aquilina* and *Cheilanthes tomentosa*.

Discussing Mr. Wooton's presentation, Dr. Rusby spoke of his own former travels in New Mexico, and of various incidents of that journey, as of the discovery of *Primula Parryi* on the top of Gray's Peak (central Arizona), blooming on July 3d under three or four inches of snow which had just fallen.

Mr. Rydberg compared some of the features presented by the sand region of Central Nebraska, referring to *Muhlenbergia pungens* and other so-called "blow-out grasses" of the sand-hills, and describing the formation of the characteristic "blow-outs," or hollows, originating in spots where the grasses had died out, and deepening rapidly, sometimes to 300 feet, producing a country where the hills are moving every year, and where he, when camp-

ing, could find no fuel except roots of sand cherries exposed along fresh "blow-outs."

Discussion by Dr. Allen, Mr. Wooton and Dr. Rusby followed relative to the loco-weed poison. Mr. Wooton said that *Spiesia Lamberti* is the chief *loco-weed* about Flagstaff, Arizona, that cattle men claim that the well-fed animal will not touch it, but that those which have formed the taste will not eat anything else. Reasons were urged by the speakers for the belief that the results of the *loco-weed* are due simply to mal-nutrition, or to effect of seeds alone, or to a poison (as extracted by Sheldon) diffused in very minute quantities throughout the plant.

3. By Dr. H. M. Richards "On some of the Reactions of Plants toward Injury."

Dr. Richards spoke on certain effects of wounding upon the functions of various plant organs as shown by his own experiments in Germany last summer. Diagrams illustrating the effect of injury upon both respiration and temperature were shown. In the former case it was seen that the respiration is greatly increased by wounding, attaining its maximum about 24 hours after the injury was inflicted, this increase depending both on the stimulus of the wound itself and upon the access of atmospheric oxygen to the tissues. The occurrence of a corresponding rise in temperature of a local nature, was also briefly referred to, the temperature curve corresponding closely to that described by the increased respiratory activity. The thermoelectric apparatus used was described, its delicacy is such as to indicate a difference of $\frac{1}{400}$ of a degree, the result with potatoes showing a maximum rise of temperature of a little over $\frac{2}{10}$ of a degree at the end of the second day, falling to the end of the fifth day. A remarkable temperature rise in the onion of nearly $3\frac{1}{2}$ degrees was explained by the fact that here the rise was not local, but affected the whole onion in accordance with its morphological structure, and with the fact that metabolism is carried on very fast in the onion.

The paper was discussed by Dr. Jelliffe and by Dr. Britton, especially with regard to the sudden escape of CO_2 after wounding, Dr. Richards considering it to be due largely to contents of intercellular spaces, but partly to solution within the cells; potatoes contain a very considerable amount of enclosed CO_2, a quart

of it being obtained from a pound of potatoes. Dr. Richards distinguished carefully the coincident but independent escape of a slight amount of CO_2 always given off, even in pure hydrogen; to be called "intermolecular respiration."

4. The next paper was a contribution read by title, from Dr. Alexander Zahlbrückner, of Vienna, a corresponding member of the Club, entitled, "Revisio Lobeliacearum Boliviensium hucusque cognitarum." The paper, which is in Latin, enumerates all the species, giving synonomy and references to the literature, and cites collectors and their numbers. There are 39 species, as follows: 9 in *Centropogon*, 2 new; 20 in *Siphocampylos*, 7 new; 1 in *Laurentia;* 2 in *Rhizocephalum;* 3 in *Hypsela;* 4 in *Lobelia.* The paper will be printed in the BULLETIN.

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